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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,918	01/29/2002	Yuan-Cheng Chin	CHIN3014/EM	3719

23364 7590 03/09/2004

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ALEXANDRIA, VA 22314

EXAMINER
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ANYASO, UCHENDU O

ART UNIT	PAPER NUMBER
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2675

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DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/057,918

Applicant(s)

CHIN, YUAN-CHENG

Examiner

Uchendu O Anyaso

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. **Claims 1-19** are pending in this action.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-19** are rejected under 35 U.S.C. 102(e) as being anticipated by *Davis et al* (U.S. Patent Appl. 2003/0034959).

Regarding **claim 1, 10 and 19**, Davis teaches an optical mouse 10 (page 2, para 0016) comprising a sensor chip 16 (figure 1 at 10, 16).

Furthermore, Davis teaches the sensor chip body 16 having pins securely provided inside the space and extending from the body of the sensor chip 16 (*see* figure 2 at 16).

Furthermore, Davis teaches an LED 34 and LED driver 80 that are embedded within the sensor chip 16 (figure 5 at 80, 90M).

However, Davis does not teach how a sensor by teaching a photodetector array 84 wherein prism 38D directs light from LED 34 onto surface 50 such that the light directed onto the surface 50C is reflected to lens 38C, which directs the reflected light onto photodetector array 84 (page 3, para 0033, figure 4 at 34, 38D, 50, 84).

Regarding **claims 2 and 11**, in further discussion of claims 1 and 10, Davis teaches a control element 72 that is electrically connected to the USB port (figure 4 at 72, D-, D+).

Regarding **claims 3 and 12**, in further discussion of claims 2 and 11, Davis teaches how a control and I/O processor 72 that is a control IC (figure 4 at 72).

Regarding **claims 4 and 13**, in further discussion of claims 1 and 10, Davis teaches an image processor 82 having a photodetector array 84 within the sensor chip body 16 (figure 4 at 16, 82, 84).

Regarding **claims 5, 6, 14 and 15**, in further discussion of claim 4, 10 and 13, Davis teaches a photodetector array 84 that is composed of light guide elements and is adjacent to LED 34, prism 38D and lens 38C (figure 4 at 34, 38D, 84).

Regarding **claims 7, 9 and 18**, in further discussion of claim 2 and 11, Davis teaches how the LED 34, sensor 16, and PCB 36 are a chip-on-board type (figure 2 at 16, 34, 36).

Regarding **claims 8 and 17**, in further discussion of claim 1 and 10, Davis teaches the body of the device is attached to the PCB 36 through hole 36A (figure 2 at 36A, 16).

*Response to Arguments*

4. Applicant's arguments filed December 30, 2003 have been fully considered but they are not persuasive.

Applicant amended independent claims 1, 10 and 19 to include the feature of at least one contact tine extending from a body having a predetermined space defined inside the body within an optical mouse. Applicant then contends that the Davis and Kwang-Chien references fail to teach or suggest an optical mouse having an LED and sensor integrated into a module made up of a single "body" with at least one contact tine extending therefrom, the LED and sensor being "received" or "mounted" in a predetermined space "defined in the body". Examiner disagrees with these applicant's assertions.

First, in view of applicant's amendments, the Davis reference is used solely to reject all of applicant's claims because Davis contains each and every element of the claims as amended. Specifically, Davis teaches in figure 2 a sensor chip body 16 having pins securely provided inside the space and extending from the body of the sensor chip 16 (*see* figure 2 at 16). Within this sensor chip 16, Davis teaches how his optical mouse comprises an LED 34 and a sensor in the form of a photodetector array 84 integrated into a module made up of a single "body" 16 with at least one contact tine extending therefrom (*see* figure 2), the LED 34 and sensor 84 being "received" or "mounted" in a predetermined space "defined in the body" 84 (*see* figures 2 & 4).

As such, applicant's arguments with regard to the sensor and LED being separate units are not persuasive because Davis shows how such features are both embedded within the sensor chip 16 (*see* figure 4 at 34 & 84).

***Conclusion***

**5. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uchendu O. Anyaso whose telephone number is (703) 306-5934. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

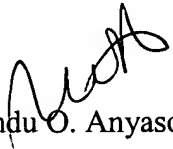
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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

  
Uchendu O. Anyaso

03/05/2004

  
CHANH NGUYEN  
PRIMARY EXAMINER